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THESIS

MANPOWER FOR THE ROYAL THAI NAVAL FLEET:
A DEVELOPMENT OF PETTY OFFICER RECRUITMENT
AND RETENTION

by

Joomphon Buasap

June 1985

Thesis Advisor: John W. Creighton

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This thesis studies manpower requirements for the Operating

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Manpower for The Royal Thai Naval Fleet: A Development of Petty Officer Recruitment and Retention

by

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Submitted in partial fulfillment of the
requirements for the degree of

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June 1985

ABSTRACT

Parallel with the development of National Defense and Security, the Royal Thai Navy has planned to build many ships equipped with modern weapon systems. To provide the petty officers for operating and maintaining these new ships, the Royal Thai Navy faces several problems which have not yet been solved.

This thesis studies manpower requirements for the Operating Fleet. The first part of the thesis determines the factors which cause the problems. The second part examines the factors and trends affecting petty officer recruiting and retention. The third part examines policy options to raise the quantity, quality, and skills of petty officers.

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I. INTRODUCTION

A. GENERAL

Military policymakers will soon be faced with hard decisions in adjusting to the realities of military manpower requirements. Manpower shortfalls, changes in quality and attitudes of recruits, and low retention rates in critical occupational specialties will force major changes. With more and more pressure on the Navy budget as an after-effect of the rising personnel costs over the past few years and the additional cost of the manpower requirements for the expansion of the Naval fleet, the Navy can no longer afford the luxury of implementing costly, unproved recruitment and retention strategies. The Navy must take steps to use its human resources more effectively.

The Royal Thai Navy has proposed an expansion of naval forces as part of its plan to revitalize the defense capacity. Today the Navy's Fleet is manned by 2900 active-duty petty officers. By 1989 the Navy aims to have 11 ships more. That force will require an increase in active-duty petty officers of 287 persons. In addition to the petty officer requirement for the expansion of the naval fleet, the Royal Thai Navy has planned to fill the vacancies of current petty officer shortage of 665 persons during the next five years in order to improve the effectiveness and readiness of the naval forces. In providing manpower for a larger fleet, the Navy's recruiting efforts will be primarily concerned with the supply of Navy personnel. The Navy must compete successfully in the labor market to attract high quality personnel for a growing number of recruits and to retain quanlified personnel.

B. OBJECTIVE OF THE THESIS

The Royal Thai Navy needs to provide the manpower to fill the vacancies of the current fleet manpower and the additional manpower requirements for the expansion of the Fleet. The objective of this thesis is to analyze the methods which can provide effective manpower management in order to meet the Navy manpower goals. Specific objectives are :

(1) To determine the quantity of petty officer requirements for the Operating Fleet during the build up period.

(2) To determine the factors affecting petty officer supply and petty officer retention during the build up period.

(3) To examine trends of the petty officer recruitment and petty officer retention during the build up period.

(4) To examine the policy options that can affect the quantity, quality and skills of personnel recruited and retained, these policy options can help the Navy ensure that high or higher quality individuals will enter the Navy.

C. SCOPE OF THE THESIS

In order to analyze the manpower problems of the Operating Fleet of the Royal Thai Navy, U.S. manpower techniques are applied to solve the problems. This thesis is divided into six chapters.

Chapter One, the introduction, presents the objective and the scope of the thesis.

Chapter Two describes the background of the Royal Thai Navy, the organization of the operating fleet, and the strength of forces.

Chapter Three presents a brief description of the fleet expansion and fleet manpower requirements.

Chapter Four presents a determination of the factors affecting the personnel recruited and retained. This chapter includes the determination of personnel recruiting trends.

Chapter Five examines the policy options that could raise the quantity, quality, and skills of personnel recruited and retained.

Chapter Six is the conclusion.

II. BACKGROUND

A. THE DEVELOPMENT OF THE ROYAL THAI NAVY SHIPS

Thailand, with a population of 44 million, located in South East Asia near the communist controlled countries of Cambodia and Vietnam, feels the need to equip its Navy with modern weapons in order to ensure its National Defense. Modern weapons are gradually being installed on the new Royal Thai Navy Ships. Some old ships will soon reach their end of service and new ships equipped with modern weapons will replace them. At present the Royal Thai Navy is manned by 32,200 active-duty personnel (including 14,000 marines). The Navy plans to develop the naval fleet during the next 5 years. It's shipbuilding plan for 1986-1990 includes 11 new ships equipped with modern weapon system.

B. THE OPERATING FLEET OF THE ROYAL THAI NAVY

The Operating Fleet is the most important unit in the Royal Thai Navy because it is the sea combat force. The primary missions of the Operating Fleet [Ref. 1] are:

(1) The attainment of the nation's objectives by use of naval forces to prevent attack by sea.

(2) The protection of the national's vital interest.

(3) The protection of transportation routes of the maritime vessels during wartime.

(4) The support of Army's combat operations from the sea during wartime.

Fullfilling these missions requires the best efforts of capable, dedicated people. Any less effort poses a danger to the nation.

1. Organization of the Operating Fleet

The Operating Fleet, one of the several units in the Royal Thai Navy, is commanded by the Commander in Chief of the Royal Thai Navy. The Operating Fleet consists of four ship squadrons: Patrol squadron, Anti-Submarine squadron, Mine squadron, and Amphibious squadron. The organization of the Operating Fleet is shown in Figure 2.1

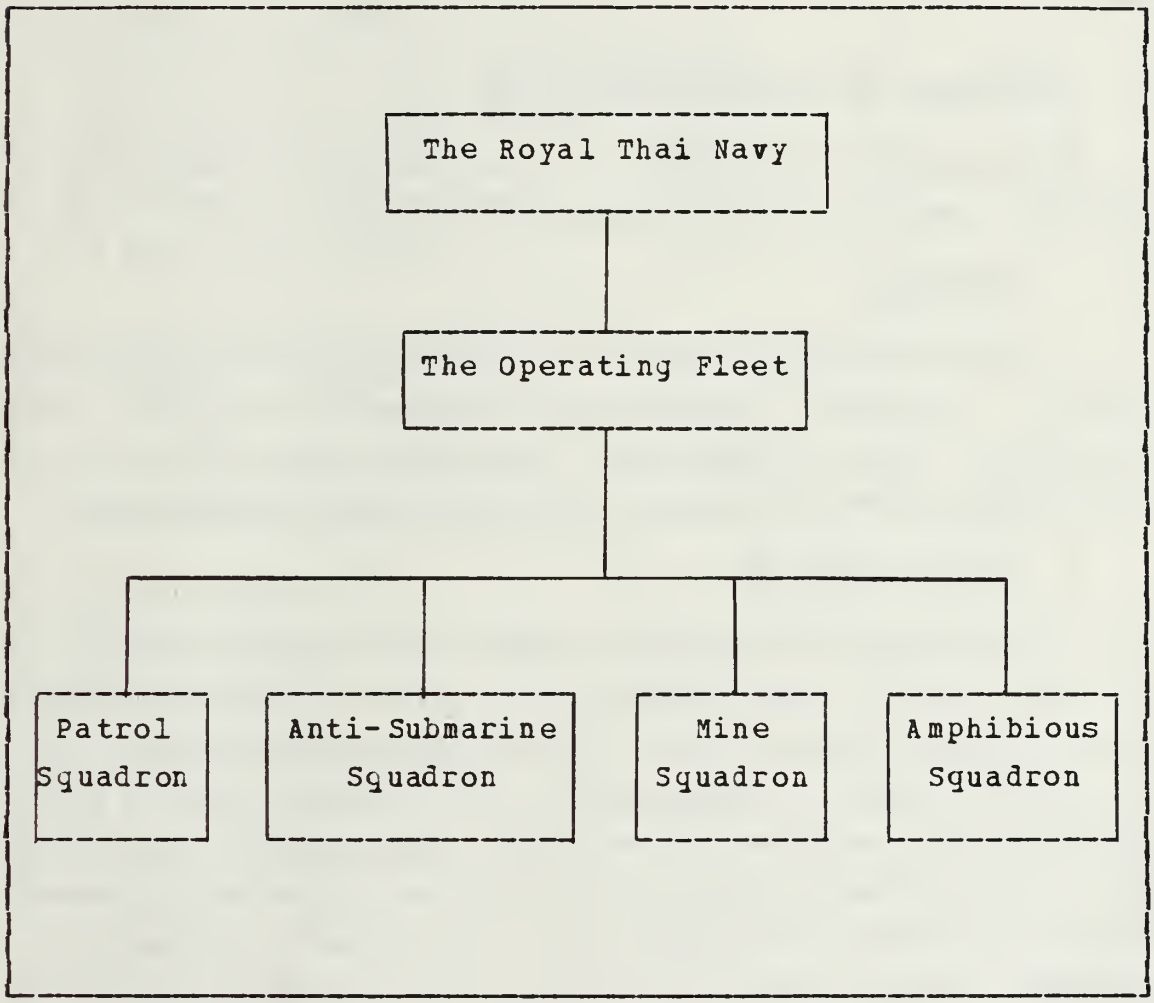

Figure 2.1 Organization of the Operating Fleet.

2. Strength of Forces

The Operating Fleet consists currently of 90 ships. Fifty nine of the various ships serve in the Patrol Squadron, six Frigates serve in the Anti-Submarine Squadron, four Mine Sweeping Coastal ships and one Mine Tender ship serve in the Mine Squadron, ten landing ships and six service ships serve in the Amphibious Squadron [Ref. 2]. The number and type of ships in each squadron are shown in Table I.

C. PERSONNEL IN THE OPERATING FLEET

The personnel in Royal Thai Navy ships are comprised of officers, petty officers, and enlisted men.

1. Officers

There are two kinds of officers serving in the Navy ships. There are officers who graduated from the Navy Academy and the officers that have been promoted from the petty officers who graduated from the Naval Rating School.

2. Petty Officers

There are two kinds of the petty officers serving in the Navy ships. They are the Naval Rating School graduated petty officers and the petty officers who are promoted from the enlisted men. About ninety five percent of the petty officers are graduates of the Naval rating School, and only about five percent of the petty officers have been promoted from the enlisted ranks [Ref. 3]. The number of the Navy's enlisted men who were promoted to petty officers during 1982-1984 are shown in Table II. There are four petty grades, namely: petty officer grade 1, petty officer grade 2, petty officer grade 3, and chief petty officer.

TABLE I

The Current Navy Ship Types

Type	Displacement (Tons)	Officer	Petty Officer
a. Parol Squadron:			
6 Fast Strike Craft (missile)	250	7	37
3 Fast Strike Craft (Gun)	450	7	39
10 Large Patrol Craft	280	7	29
20 Patrol Gun Motor Boat	100	3	15
24 Fast Patrol Craft	20	1	9
b. Anti-Submarine Squadron:			
1 Frigate "Yarow" Class	1800	16	124
2 Frigate "PF103" Class	1000	12	80
1 Frigate "Cannon" Class	1900	12	95
2 Frigate "Tacoma" Class	1445	12	91
c. Mine Squadron:			
4 Mine Sweeping Coastal	362	7	20
1 Mine Tender	1000	9	37
d. Amphibious Squadron:			
5 Landing Ship Tank	3640	10	63
5 Landing Ship Medium	380	8	25
2 Transport Ship	815	7	27
2 Tanker	960	6	19
2 Water Carrier	485	4	21

TABLE II

Navy's Enlisted Men Who were Promoted To Petty Officer Grade 1 FY 1982-1984

Fiscal Year	Total Enlisted Men	Promoted to PO1	Percent
1982	12,627	473	3.75
1983	13,239	630	4.76
1984	13,240	605	4.57

3. Enlisted Men

There is only one kind of enlisted man serving in the Royal Thai Navy. The Navy recruits the enlisted men by draft. They serve in the Navy for two years. During the first six months, enlisted men have to be trained at the Navy Recruits Training School. This results in only one year and six months of actual service time on board ship. If an enlisted man who was graduated from the secondary school prefers to continue staying in the Navy, the Navy will promote him to petty officer grade 1 after he has completed a 2 year-tour. However, as stated earlier, there were small numbers of enlisted men who continued in the Navy.

D. FLEET PERSONNEL PROBLEM

The major manpower problem of the Operating Fleet is the shortage of petty officers due to high attrition rates. There is only 81 percent of the approved manning level of petty officers serving on each ship [Ref. 4]. When the ships sail to the sea for operating missions, the personnel from the other ships on the base will be temporarily moved to fill the vacancies during the sea period. The current number of petty officers in each squadron is shown in Table III.

TABLE III

Current Petty Officer in the Operating Fleet

Unit Squadron	100 Percent	Current	Shortage
Patrol	1276	1176	100 (8 %)
Anti-Submarine	885	621	264 (30 %)
Mine	339	258	81 (24 %)
Amphibious	1064	845	219 (21 %)
Total	3564	2900	664 (19 %)

III. PETTY OFFICER REQUIREMENTS FOR THE OPERATING FLEET

A. BACKGROUND ON PETTY OFFICER REQUIREMENTS

The Royal Thai Navy has proposed an expansion of its Naval Forces over the next 5 years as part of plan to revitalize the defense capacity. The Royal Thai Navy believes that this higher level is necessary to meet the growing threat posed by Vietnam. The majority of these ships would be "deployable" combatants built to support or add to the Navy's ship squadrons the predominent naval force structure used today.

The Navy requirements for military manpower are determined both by the size of the operating squadrons and by the missions to which the various ships and support groups are assigned. In the event of wartime mobilization, their crews would be augmented by reserve personnel. In addition to its seagoing forces, the Navy maintains a large number of shore facilities where personnel perform ship maintenance, training, medical, engineering, and support functions. Shore jobs that can provide additional combat capability during wartime are normally filled with military personnel, while civilians are used for noncombat-related positions. For example, minor repair and maintenance of ships is usually done by military personnel since this work would probably be performed at sea during a conflict, whereas major ship overhaul is conducted in the naval shipyards with civilian personnel.

Civilian personnel generally work in one location, while active-duty military personnel rotate between sea and shore duty assignments. The military personnel do not always perform the same jobs on shore and at sea. For example,

ships boiler technicians have no directly comparable job at shore facilities and so are generally assigned other duties. By contrast, — electronics repair personnel are required at naval bases as well as aboard ships. During peacetime, manpower and equipment levels often fall short of authorized levels, which in turn are sometimes less than the formally stated requirements. Such shortfalls arise at the cost of reduced military preparedness but at a savings of resources freed for other purposes. Given the various techniques for determining requirements, and the constraints on resources, it is not surprising that judgements vary regarding the appropriate levels of authorizations and requirements.

The requirements determination process has occasionally been challenged on several technical, but nonetheless important, aspects. First, standard manning guidelines typically specify a single configuration of the number and skill levels of personnel for a given task, but other configurations such as fewer but more highly skilled personnel may be able to accomplish the same task. If they specified alternative configuration, planners would have more latitude in selecting the least costly one or in finding the one best suited to the existing supply of personnel.

B. PETTY OFFICER REQUIREMENTS FOR FLEET EXPANSION

1. Navy Fleet Plan

The growth in Navy manpower requirements will follow closely the path of fleet expansion. Navy planning focuses on the "deployable forces". Its objective is to build 11 additional ships equipped with modern weapon systems. These ships are 2 Corvettes, 1 Landing Ship Tank, 2 Mine Hunters, and 6 Large Patrol Craft [Ref. 5]. This plan will be completed at the end of fiscal year 1990. The projected additional ships under the fleet plan are shown in Table IV.

TABLE IV

Projected Additional Ships under Fleet Plan FY1986-1990

Ship Class	1986	1987	1988	1989	1990	TOTAL
Corvette	1	1	-	-	-	2
Landing Ship Tank	-	-	1	-	-	1
Mine Hunter	-	2	-	-	-	2
Large Patrol Craft	1	1	1	1	2	6
Total	2	5	2	1	2	11

2. Petty Officer Requirements for the New Ships

A larger fleet will require more manpower. One Corvette requires 50 petty officers, one Landing Ship Tank requires 45 petty officers, one Mine Hunter requires 17 petty officers, and one Large Patrol Craft requires 18 petty officers [Ref. 6]. If the fleet expands as planned, the Navy projects an additional requirement for 287 petty officers by the end of 1990. The petty officer requirements as projected are shown in Table V.

TABLE V

Projected Petty Officer Requirements for the New ships

Ship Type	1986	1987	1988	1989	1990	Total
Corvette	50	50	-	-	-	100
Landing Ship Tank	-	45	-	-	-	45
Mine Hunter	-	34	-	-	-	34
Large Patrol Craft	18	18	18	18	36	108
Total	68	147	18	18	36	287

C. PETTY OFFICER REQUIREMENTS FOR THE CURRENT SHORTAGE

1. The Development of Fleet Manpower's Policy

As stated earlier, there are only 81 percent of petty officers requirements serving on board ships in the Operating Fleet. This shortage of personnel detracts from the effectiveness of the new equipment on the ships. The new weapons and their fire control systems are required to be operated, tested, and maintained on a routine basis. With the lack of qualified operators and maintenance personnel, the new equipment is usually in-operative when needed.

The Royal Thai Navy is determined to strengthen the Naval forces, so that they will be fully ready to preserve

the security of the nation. Achieving this greater strength requires new, more capable weapons. However no Naval forces, no matter how well armed, is more capable than the individaul and collective strengths of its Navy personnel. For the Operating Fleet maintain the objective of Naval mission effectively, all ships must be ready for immediate sea operations. Thus, the Navy needs 100 percent manpower for all ships [Ref. 7] to maintain and keep the ship's equipment in good operating condition over a long period.

2. Current Petty Officer Requirements

The Navy planned to fill the shortage of manpower for the purpose of readiness and mobilization of all ships during the next 5 years by 20 percent or about 133 petty officers per year. It will take some time to eliminate the petty officer shortage completely. In recruiting the petty officers, it requires 2 years for training in the Naval Rating school [Ref. 8].

D. PROJECTED PETTY OFFICER REQUIREMENTS

In order to increase the effectiveness of the Naval Force by reducing the numbers of the shortage personnel and in order to provide the personnel for fleet expansion, the Navy projected an additional petty officer requirement of 951 persons in the next five years (1986-1990). The projected petty officer requirements are shown in Table VI

TABLE VI

Projected Petty Officer Requirements
Under Fleet Plan FY1986-1990

Requirement	1986	1987	1988	1989	1990	Total
For the Shortage	133	133	133	133	133	665
For the new ships	68	147	18	18	36	307
Total	201	280	151	151	169	952

IV. SUPPLY OF THE PETTY OFFICER RECRUITS AND RETAINED

The Naval Forces can be effective only if all of its members subordinate their personal desires to the greater purposes of the military organization. A civilian can quit if he or she does not like a job, the supervisor or the terms of employment; a military member is bound by an oath and a contract for specified service, and cannot bargain for better terms. A civilian can choose where to take employment and where to live, a military member goes where official orders say to go. The most stressful aspects of military life, overtime work without pay, long tours at sea, frequent moves, family separations and disruptions, and the ultimate stress and danger of combat, are imposed without choice on the part of the member.

There are civilian jobs that involve risk to life and limb, and work under unpleasant circumstances. None of these jobs, however, entails the surrender of choice to the degree that military service does. Danger and discomfort are not shared evenly in the military community, but all members are substantially equal in the loss of the freedom of choice.

The unique conditions and demands of military service require service members with special characteristics. Military members, beyond having the physical and mental abilities required for their jobs, must have a special measure of dedication and loyalty to their comrades in arms and their military organizations. These qualities must be underlaid with a love of their country and its ideals.

There are compensating factors that make the sacrifices demanded of military members more acceptable. The intense satisfaction of being relied upon as a member of a group with a highly important mission, the camaraderie, the opportunities for assuming responsibilities and new challenges. Without those intangible rewards a military organization would not be effective. Clearly, however, there also must be tangible benifits to provide fair compensation to our military members in order to attract and retain the talented, dedicated people that make the forces effective.

A. THE KEY FACTORS AFFECTING PETTY OFFICER RECRUITMENT

The determination of petty officer requirements includes not only what the Navy thinks they need in order to meet the mission requirements, but also the reality of what they think they can get and how much it costs. Several factors will affect the supply of petty officers and, hence, the ability of the Navy to meet its requirement.

1. Demand for Noncomissioned Officers in Other Services

The members of recruits willing to enter the Navy will be influenced by the recruit demands of the other Services. As part of plans to revitalize defense capability, the Army and the Air Force require growth in their personnel forces in the same ratio as the Navy. The Air Force will experience growth both in quantity and quality over the next several years. This growth will be especially competitive with the goal of the Navy petty officer requirement. In addition, the Air Force has traditionally enjoyed higher retention rates than the Navy and, like the Army, can boast a better record of minority progress than the Navy in the noncomissioned officer and officer ranks.

2. Military/Civilian Pay Ratio

Compensation can be an effective policy tool for shaping the size of the force as well as its skill and experience mix. Changes in compensation change the attractiveness of military service, and that in turn affects recruitment, retention, individual performence, and the overall force profile. In many cases, the responsiveness of recruitment or retention to a change in compensation can be estimated with considerable accuracy. These estimates can then be applied to evaluate the manpower consequences of alternative compensation policies. This procedure of quantitative estimation and prediction has been used successfully in predicting the results of different recruiting and retention incentives, ranging from across-the-board pay increases and bonuses to educational and retirement benefits. Therefore, the costs of military manpower can be viewed from different perspectives. By one perspective, the costs indicate the budgetary outlays associated with a force of existing size, skill, and experience. By another perspective, the costs can be thought of as an outcome of the process by which policy makers attempt to choose cost-effective modifications of the compensation package, and, in so doing, improve the recruitment, retention, or performance of the force.

The size and distribution of military pay influences recruiting and retention. Increasing compensation and monetary benefits will make Navy life more attractive. The attrition rates of the navy personnel would reduce and therefore make the Navy more effective.

3. Labor Market Conditions

The economy of Thailand began to fall over a year ago, and is expected tocontinue dropping over the next few years. The Labor Department reported that there were 1.5 million Thai people unemployed in 1984, and the unemployed would rise to 1.7 million in 1985, a 13 percent increase [Ref. 9]. Rising unemployment makes recruiting more easy because more persons leave the civilian market and more recruits are willing to join the Navy.

B. THE KEY FACTORS AFFECTING PETTY OFFICER RETENTION

The retention for members of the Navy is an important indicator of the state of Naval forces manpower. Retention, broadly speaking, is a decision made by a member of the service and by his superiors for a commitment to continue on active-duty. Retention factors are important elements of policy analysis because of their implications for overall management of the armed forces. Levels and types of military compensation, for example, are often justified as necessary for retaining qualified personnel. Considerations about retention also affect many decisions about routine personnel management, such as frequency of moves from one station to another and the type of benefits provided to dependents of military personnel. In addition to the compensation, the labor market conditions also affect military retention, for example, falling unemployment causes lower retention rates because more persons leave the military to pursue civilian opportunities.

C. PETTY OFFICER RECRUITING AND RETENTION'S TRENDS

The number of Naval ships is planned to grow, thus increasing the demand for petty officers. The Navy must

examine the prospects for meeting this growing requirement for petty officers as the number of Navy ships increases. Based on these assumptions, over the five years between fiscal year 1986-1990, the Navy would add 952 petty officers to its naval fleet. The growth would be concentrated in 1986 and 1987 when 481 petty officers would be added.

Success or failure in Navy recruiting and retention are inevitably affected by the state of employment in the civilain economy. A strong economy has the potential to hurt both recruiting and retention, but a weak economy bouys Navy manning. Meeting the goal of full requirement can be met by 1990 if the Navy continues to maintain the competitive military/civilain pay ratio. The determination of this trend is based on the assumption that the favorable recruiting experience of the past few years can be sustained in the future. The number of applicants who want to enter the Navy as petty officers has increased every year, the selection ratio of the entrance examinations rose from 1/14 in 1983 to 1/20 in 1985 [Ref. 10]. The number of applicants and the selection ratios from the 1983-1985 entrance examinations are shown in Table VII. Although rising requirements for petty officers and noncommisioned officers in all Services makes the recruitment less favorable, this trend will be offset by increasing unemployment in civilain market.

In addition to more favorable recruitment, assuming rising unemployment and maintenance of competitive military/civilain pay ratio, the retention of career petty officers should be better than in the last few years. The attrition rates of petty officers should decrease because it will be more difficult to find new jobs in the civilain market better than those in the Navy.

TABLE VII

Selection Ratio of Petty Officer's Entrance Examination FY 1983-1985

Fiscal Year	Applicant	Selected	Selection Ratio
1983	16,831	1,190	1/14
1984	15,986	1,018	1/16
1985	16,372	796	1/20

V. POLICY OPTIONS FOR IMPROVING RECRUITMENT AND RETENTION

A military force is only as good as its members. A force with dedicated, competent members has the potential for success in combat. A force whose members lack dedication and competence is unlikely to succeed under the strains of war. Critics have charged that the members of the miltary force lack the qualities required to produce a capable force. Specifically, the critics claim that personnel of the military force lack the neccessary education, aptitude and discipline. The central concern is that presently there is no system in place to determine what is good so that it can be nurtured and built upon, and to determine what is unsatisfactory so that it can be corrected.

The Royal Thai Navy has planned to develop the Naval forces. Many new ships equipped with modern equipment and weapon systems will replace the old ships. The increasing technical nature of the Navy requires greater need for technically skilled personnel. The Navy must provide sufficient qualified personnel to man the highly technical equipment and weapon systems. The Navy must consider:

(1) How to attract sufficient quantity of high quality petty officers.

(2) How to retain sufficient numbers of qualified petty officers in order to prevent the future shortage of petty officers.

Although, the recruiting plans indicate the potential to meet the end strength goal on accession requirements, it is valuable to consider policy options that can affect the quantity, quality, and skills of personnel recruited and retained. These options can help insure that sufficient

numbers of high quality individuals will enter the Navy. They also aid in channeling personnel into hard-to-fill occupations and in preventing future shortage of trained personnel.

A. ATTRACTING MORE HIGH QUALITY PETTY OFFICER RECRUITS

The relative ability of military personnel to learn military skills and perform well in military units is usually refered to as "quality" of the personnel. The normal measure of quality for enlisted accessions are the percentage that have passed the entrance examination. The term "high quality" means the persons who score high on the test. In the U.S. military, "high quality personnel" are refered to as the high school graduates whose scores on the Armed Forces Qualification Test (AFQT) placed them in categories I through IIIA (50 percentile or above).

The U.S. Department of Defense (DoD) groups AFQT scores into five broad categories and somtimes into finer subcategories. Those in categories I and II are above average in trainability, those in category III are average, those in category IV are below average, and those in category V are markedly below average [Ref. 11]. Table VIII shows the percentile score for the various categories.

This form of quality measurement is very useful to manpower policymakers because of its proven reliability and because it can be readily quantified. AFQT scores are good general indicators of the characteristics of the young people received by the services. The experience of the last 30 years suggests that individuals who score high on the AFQT are more likely to be successful in military training than are more their lower scoring peers. Additionally, individuals who score low on the AFQT are more likely to have disciplinary problems. While there are some high

TABLE VIII

U.S. Armed Forces Qualification Test Scores By Categories

AFQT Category	Percentile Score Range
I	93 - 100
II	65 - 92
IIIA	50 - 64
IIIB	31 - 49
IVA	21 - 30
IVB	16 - 20
IVC	10 - 15
V	0 - 9

scoring personnel who prove ineffective and some low scoring personnel who perform well, on the average, the higher an individual's AFQT score, the greater the likelyhood of successful military performance [Ref. 12]. The upper mental category or high quality individuals is desired for his ability to meet the technical education and skill requirement of many Navy jobs. The high quality individuals also provide lower attrition rates than the low quality individuals. High school graduates are desired, as their attrition rates during the 1970's were approximately one-half of the attrition rates for non-high school graduates [Ref. 13].

1. Postservice Educational Benefits

The recruiting force needs new tools to attract high quality personnel. Continual increases in recruiting miss the heart of the problem. For most youth today, the Navy no longer holds out an image of providing an opportunity for personnel development. The Navy must consider legislation that would establish an educational assistance program that will provide a substantial inducement to serve in the Navy.

One method that would attract more high quality personnel to enter the Navy is a Postservice Educational Benefits program. The program offers additional specific education to the presonnel recruits. The purpose is to encourage personnel to seek service in the Navy. Additionally, this program is valuable to be used selectively to assist recruiting in critical skill areas.

During 1981, in a nationwide experiment, a U.S. military Educational Assistance Test Program was conducted to evaluate the effects of educational benefits on enlistments. The experiment was mandated by Congress to test several Veterans Educational Assistance Programs (VEAP) with more generous benefits for high-quality enlistees. The principal questions addressed by the test were:

(1) How effective were each of the test programs for attracting high-quality recruits?

(2) What would be the effect on recruiting of eliminating the VEAP contibution requirement?

(3) Can a targeted program restricted to enlistees entering certain hard-to-fill specialties be used to increase total enlistments?

(4) How can a new educational program best be structured to assist recruiting while minimizing costs?

The test program yielded useful results. Firstly, it provided the only strong evidence that a sufficiently

generous program of veterans educational benefits can bring high-quality recruits into the military. The U.S. Army's Ultra-Veterans Educational Assisted Program raised Army enlistments of high-quality males by about 9 percent. Secondly, the test program has shown that a program of educational benefits need not be open to all enlistees to have an impact on total enlistments. In the Air Force, the specialties open to the test programs accounted for less than 20 percent of 1980 high-quality male enlistments, and in the Navy only 10 percent, yet both services showed substantial enlistment gains under the Tuition/Stipend program. Finally, the educational benefits can be used to channel high-quality enlistees into specific skills [Ref. 14]. The details of the Educational Assistance Test Program are described in Appendix A.

2. Enlistment Bonuses

Enlistment bonuses can be used primarily as a tool for channeling quality recruits into hard-to-fill specialties and for eliciting additional man-years of service in those specialties. This method offers the bonuses to the high-quality recruits who have stayed in the Navy for a period of time. Using enlistment bonuses can attract more high-quality personnel to stay in the Navy longer than normal enlistment.

The U.S. Army's Enlistment Bonus Test, began in July 1982. For this test, Congress authorized bonuses to high-quality enlistees in selected specialties who choose the standard three-year or four-year tour. As the test results become available over the course of the next year, enlistment bonuses yeild an enlistment response that is larger than might be expected [Ref. 15].

3. Advertising

Another method for raising the number of high quality recruits is advertisting. Increasing budgets and improving the procedure of advertising can get more people interested in the Navy. The Navy needs to make a psychological campaign in order to induce the people to the Navy. All kinds of advertising media such as television, radio, newspapers, and posters, are good instruments for this purpose.

The effects of advertising were studied in a 1980 U.S. Navy experiment. Advertising expenditures were observed to have significant effect on the number of enlistment contracts obtained. More enlistment contracts were signed in the areas which increased advertising expenditures, and less enlistment contracts were signed in the areas which reduced the advertising expenditures [Ref. 16].

B. IMPROVING RETENTION OF CAREER PETTY OFFICERS

One of the best ways to offset the additional petty officer requirements is to increase the retention of career personnel. This may have several positive effects. First, reducing the number of recruits needed. Second, preventing future petty officer shortage. Third, retaining an individual eases the pressure to bring in or train a replacement. Then, the important key is to retain experienced personnel, who can be more readily assigned to a job for which he is suited, thereby raising his productivity. All of these factors are capable of saving cost. For example, reducing the number of recruits needed reduces the recruiting and training costs. The Royal Thai Navy spent $1,852 for the average training cost of one petty officer recruit during fiscal year 1983-1984 [Ref. 17]. The details of training cost are shown in Table IX.

TABLE IX

The Expenditures for One Petty Officer Recruit During Training Peroid FY1983-1984

Expenditure Item	Dollars
Inventories and supplies	258
Military compensation	1,150
Transportation and fuel	175
Training aids	36
Electricity and fresh water	19
Amunition	209
Total	1,852

Retention factors are important elements of manpower policy analysis because of their implications for overall management. Variations of levels and types of military compensation are often justified as necessary for retaining qualified personnel. Considerations about retention also affect many decisions about routine personnel management, such as frequency of moves from one station to another and the type of benefits provided to dependents of Navy personnel. Additionally, job match and satisfication is also important to consider.

1. Competitive Military Compensation

The level of military compensation has a substantial effect on retention. Competitive compensation needs to be in tangible forms such as basic pay, sea pay, retirement pay, and professional pay, rather than in fringe benefits because many people are unwilling or unable to provide estimates of their annual regular military compensation, or the values they place on fringe benefits. It is commonly believed that many personnel are unaware of the tax advantage of the cash basic. Surveys have shown that few enlisted personnel have a clear idea of the concept of Basic Military Compensation and will invariably underestimate the value of their compensation [Ref. 18].

2. Improving Living and Working Conditions

Poor living and working conditions such as working in a rotation-imbalanced specialty, family separations, and long tours at sea, discourage personnel from staying in the Navy. Navy personnel accept arduous duty assisgnments and frequent moves as a matter of course. However, the Navy has a responsibility to provide housing and other facilities for Navy members and their families that will serve to offset the unavoidable hardships of Navy life. If the living and working conditions are improved, less personnel want to leave the Navy, thus reducing the attrition rate of petty officers.

3. Job Match and Satisfaction

One factor that influences attrition behavior of the Naval petty officers is job match and satisfaction. In making job assignments, the Navy must weigh job availability and aptitude as well as preference. Nevertheless, an assignment scheme that placed petty officers in undesirable

or hastily considered jobs could increase attrition and obviate the goal of shifting manpower into needed occupations. The process by which a recruit is "fit" with a specific military job may be indicative of the quality of the match. The new petty officers who are not knowledgeable about military jobs, their qualifications for those jobs, or even about what type of job they desire are less able to discriminate among jobs for which they are well-suited.

VI. CONCLUSION

The Royal Thai Navy has planned to build 11 new ships equipped with modern weapon systems during the next 5 years as part of a plan to revitalize the national defense capacity. A larger fleet will require more manpower. The Navy estimates an additional requirement of 287 petty officers for manning the new ships. In addition to petty officer requiement for the new ships, the Navy projected a requirement of 665 petty officers to fill the vacancies of the current petty officer shortage in order to improve the effectiveness and the readiness of the naval forces.

The determination of factors affecting personnel supply during the build up period shows that the Navy can meet the full petty officer requirement by fiscal year 1990 as planned. However, the Navy must consider the quality of personnel recruits. Increasing technology in weapon systems causes greater need for high skilled technical personnel for operating and maintaining these weapons over a long period. The experience of the past suggests that high quality individuals perform their jobs better than low quality individuals. There are several methods that would attract more high quality personnel to enter the Navy. Postservice educational benefits, enlistment bonuses, and advertising are usually good methods for attracting high quality personnel recruits.

In addition to consideration of the quality of personnel recruits, the Navy must consider the retention of career personnel. Increasing retention would reduce the number of recruits needed, thus decreasing recruiting and training cost. Increasing retention also lowers the future shortage of skilled personnel. Considerations about retention affect

many decisions. Competitive military compensation, improving living and working condition, job match and satisfaction are the important considerations for retaining career personnel.

APPENDIX A

U.S. MILITARY EDUCATIONAL ASSISTANCE TEST PROGRAM

In 1976 Congress terminated the largest federal program of direct student assistance, the GI Bill. Although past servicemembers would continue to be eligable for GI Bill benifits, persons enlisting after December 31, 1976, were offered only the less generous Veterans Educational Assistance Program (VEAP). In switching from the GI Bill to VEAP, Congress substantially reduced the maximum dollor amount of the services' educational benefit offering. To receive benefits under VEAP, enlistees must make monthly contributions of $25 to $100, which are later matched two-for-one by the Veterans Administration. The maximum individual contribution is $2,700, yeilding a total possible payout of $8,100 to meet expenses for college or vocational training.

Recruiting results in the years following the introduction of VEAP were disappointing. Although no direct link has been established between the termination of the GI Bill and these poor results, in 1978 Congress moved to enhance the basic VEAP benefit, calling for a test of lump-sum enhancements, called "kickers", for high-quality youths-high school graduates scoring at or above the 50th percentile on the military aptitude test. The results of this early test were inconclusive, however, and the recruiting problems continued. Dissatisfaction with VEAP mounthed in the services and in Congress, where proposals to expand or replace VEAP were actively considered in 1980.

The result was a large-scale test of more generous educational benefit program, mandated by Congress for fiscal year 1981. Three parties were involved in the development of the test programs:

(1) The Army requested permission to test larger kickers.

(2) The House of Representatives authorized a test of a new program modeled after the World War II GI Bill.

(3) The Senate Armed Services Commitee called for a test of VEAP without the requirement that the individual contribute.

Each program was offered in a "test cell" consisting of a set of geographically dispersed areas of the country. In the remainder of the country, the control cell, the services' educational benefit offering remained as they were during 1980. The Rand Corporation designed the set of area assignments that matched the cells on a number of criteria to ensure that, at the beginning of the test, recruiting conditions were approximately the same in all the cells. The test was set to run from December 1, 1980, through September 30, 1981.

The details of the four test programs were as follows:

Control program: basic, contributory VEAP in services kickers of up to $6,000 for qualifying Army enlistees only.

Ultra-VEAP kicker program: identical to control program except Army kickers raised to a maximum of $12,000.

Noncontributory VEAP program: DoD payment of the VEAP contribution for qualifying enlistees in all services, Army kickers of up to $6,000.

Tuition/Stipend Program: for qualifying enlistees in all services; tuition assistance ($1,200/year) plus subsitance allowance ($300/month), for up to four academic years, benefits indexed for inflation, option for benefits to be transferred to dependents or cashed out upon reenlistment, no extra benefits for Army enlistees.

Three features of the test programs were particularly important. First. as noted above, in the control cell each of the services offered only the educational benefit plan it

had offered nationwide in 1980. Thus the control cell indicated what the year-to-year change in recruiting conditions would have been nationwide had there been no special test programs. Second, all of the test programs, and the Army kickers in the control program, were limited to certain enlistees: higher quality individuals enlisting in one of a designated set of "critical skills". The designated specialties covered a majority of Army job openings, but only about 20 percent of Air Force and 10 percent of Navy openings. Third, in all of the test cells but one-the Tuition/Stipend cell, the Army offered substantially greater benefits than the Navy, Air force, and Marine Corps.

To determine the gross enlistment effects of the programs in the three services, by comparing each test cell with the control cell in terms of their gains in high-quality male enlistments between a base period (December 1979-September 1980) and the test period (December 1980-September 1981). For example, in the Army the control cell showed a 21.7 percent gain, and the Ultra-VEAP kicker cell a 32.3 percent gain, yielding an estimate of the effect of the kicker program of approximately 9 percent. The experiment also developed a regression model to control for outside factors affecting enlistments, local labor market conditions and recruiting effort-but the regression results did not substantially change the estimates.

Each of the test program increased enlistments of high-quality males in at least one of the services. The Army's Ultra-VEAP kicker program raised Army enlistments by 9 percent. The Noncontributory VEAP program, offered in all the services, raised enlistments by a statistically significant amount only for the Air Force (5 percent). Finally, the Tuition/Stipend program showed increases of 10 and 8 percent in the Navy and Air Force, respectively, but reduced Army enlistments by 6 percent. This decline was apparently

a result of the equalizing of benefits across the services under that program. The converse effect, however, did not occur. Navy and Air Force recruiting was not hurt by the Army Kickers in the Ultra-VEAP cell. These cross-service effects indicate that educational benefits may be less active at bringing recruits into the Army than into the Navy and The Air Force, and that the Army could be hurt if a new program of educational benefits did not maintain the current differential for the Army.

An examination of enlistments by military specialty indicates that the test programs were able to channel enlistees into the eligible specialties in the Army and Air Force (specialty data were not available for the Navy). The skill channelling effect was pronounced in the Army, where enlistments in the eligible specialties under the Ultra-VEAP kicker program rose sufficiently to absorb all of the total enlistment gain attributable to the program. Even the Tuition/Stipend program, which produced no enlistment gain for the Army, shifted recruits into the covered skills. The data also showed that when the Army list of eligible specialties was expanded beyond the combat arms, recruiting for the combat arms hurt. Skill channelling was much less apparent in the Air Force, many enlistees attracted to the Air Force by the Noncontributory VEAP and Tuition/Stipend programs chose specialties that did not qualify them for the special benefits. The results suggest that the narrowly targeted program can increase enlistments by an amount that is out of proportion to the limites number of jobs covered, and do so at a cost per additional recruit that probably is lower than that of a general program under which everyone brought in by the program may ultimately receive the benefits.

(1) The test results have the following implications for future policy:

Serious consideration should be given to retaining a contribution requirement in any new military educational benefits program. The requirement does not discourage enlistments, but it does reduce costs.

(2) Skill targeting should be used as and additional means for limiting program costs. A targeted program can channel benefit-attracted enlistees into hard-to-fill specialties, but more important from a cost standpiont, it ensures that most of the program dollars spent go to those enlistees with the greatest commitment to pursuing further education.

(3) In the design of a new program, the special prcblems faced by the Army should be recognized. The test has shown that one means of assisting the Army is to build more generous educational benefits into the Army program. However, some alternative enlistment incentive or pragram might be a more cost-effective way of giving the Army any special help it might need.

These conclusions provide a framework for the design of a relatively cost-effective program of military educational benefits. They should not be taken to imply, however, that a new program, or even retention of the existing VEAP (plus Army kickers), is necessarily desirable. Although the Educational Assistance Test Program has shown that a contributory, targeted program would be more cost effective than a general entitlement, it is not currently possible to determine exactly how costly such a program would be. It is important, therefore, to make the policy decision only after a close examination of the effectiveness and costs of alternative means and bonuses, additonal recruiters, or advertising, for example, for bringing highly qualified individuals into the military services.

(Source: Ref. 14)

LIST OF REFERENCES

1. Royal Thai Navy Head Quater, The Organization of Operating Fleet, p. 9, Royal Thai Navy Printing Office, Bangkok, October 1979.

2. Capt. Moore, J., RN., Jane's Fighting Ships, pp. 468-474, Jane's Publishing Company Limited, London, 1984.

3. Department of Personnel, the Royal Thai Navy, The Promotion's Policy for Enlisted Men, p. 12, Bangkok, December 1984.

4. Operating Fleet Command, Mounthly Manpower's Reporting, pp. 6-10, Sattaheep, October 1984.

5. Department of Operations, the Royal Thai Navy, Naval Fleet Expansion Projected 1986-1990, p. 17, Bangkok, December 1984.

6. Royal Thai Navy Head Quarter, Book of Operating Fleet Personnel's Position, pp. 20-29, Royal Thai Navy Printing Office, Bangkok, January 1980.

7. Department of Personnel, the Royal Thai Navy, Development of Naval Fleet Manpower Policy, p. 7, Bangkok, December 1984.

8. Department of Educational, the Royal Thai Navy, Naval Rating School Educational's Course, p. 15, Bangkok, October 1979.

9. Division of Labor Statistical, the Labor Department, Population's Unemployment Status, p. 28, The Labor Department Printing Office, Bangkok, January 1985.

10. Department of Educational, the Royal Thai Navy, Statistical Data of Naval Rating School's Entrance Examination, pp. 21-27, Bangkok, February 1985.

11. Weinberger, Caspar W., Military Manpower Task Force, p. II-5, A Report to the President on the Status and Prospects of the All Volunteer Force, U.S. Government Printing Office, Washington D.C., November 1982.

12. Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics), Aptitude Testing of Recruits, p. 6, Washington, July 1980.

13. Fernandez, Richard L., Forecasting Enlisted Supply: Projections for 1979-1990, p. 23, The Rand Corporation, Santa Monica, California, September 1979.

14. Fernandez, Richard L., Enlistment Effects and Policy Implications of the Educational Assistance Program, pp. 74-75, The Rand Corporation, Santa Monica, California, September 1982.

15. Hosek, James R., Fernandez, Richard L., and Grissmer, David w., Active Enlisted Supply: Prospects and Policy Options, p. 27, The Rand Corporation, Santa Monica, California, March 1984.

16. Carroll, Vincent P., Rao, Ambar G., The Navy Enlistment Field Marketing Experiment Volumn I: Executive Overview and Summary, p. 21, Wharton Applied Research Center, University of Pennsylvania, Philadelphia, October 1982.

17. Department of Logistic, the Royal Thai Navy, Assumptions of the Naval Rating School, pp. 7-15, Bangkok, January 1985.

18. Binkin, M., The Military Pay Muddle, p. 16, The Brookings Institute, Washington, D.C., 1975.

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